## ABSTRACT

The invention relates to the use of morpholino-nucleosides of formula:

in which  $R^1$  represents a nucleic base and  $R^2$  represents a group corresponding to one of the following formulae:

$$-(CH_2)_n-NH_2$$
  $-(CH_2)_n-SH$   
 $-(CH_2)_n-COOH$   $-(CH_2)_n-OH$   
 $-(CH_2)_n-NH-R^3$   $-(CH_2)_n-S-R^3$   
 $-(CH_2)_n-CO-R^3$   $-(CH_2)_n-OR^3$ 

in which n is an integer ranging from 1 to 12 and  $R^3$  is a group derived from a label, from a protein, from an enzyme, from a fatty acid or from a peptide, as chain terminators in a process of DNA or RNA sequencing by the Sanger method, or for the labelling of DNA or RNA fragments.